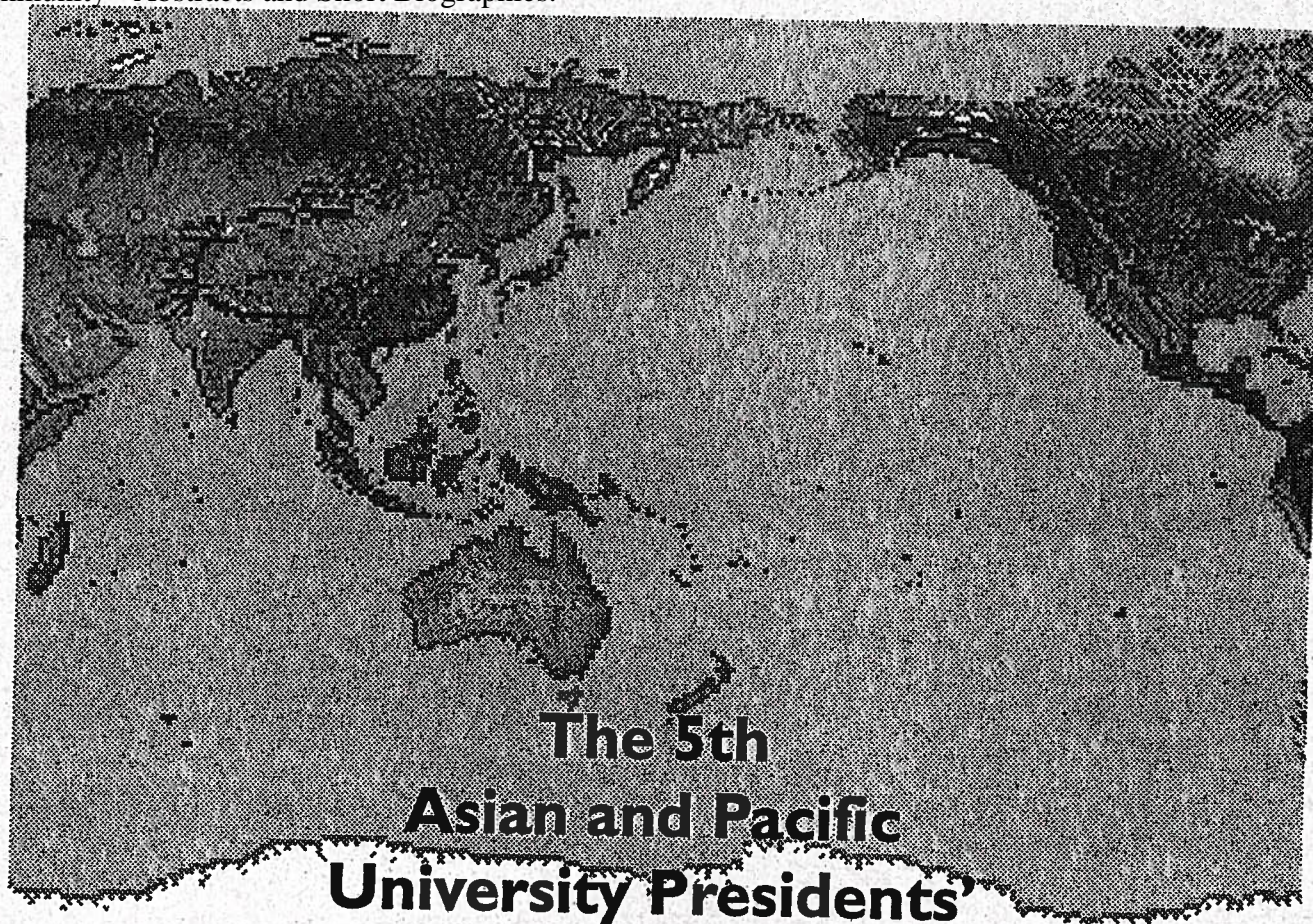


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**The  
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## The Old and the New Forestry of the Pacific Rim

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Humans have cut down trees wherever there were forests, and for many reasons: fear, fuel, security, transportation, housing, or border control. But until the late 20th century, I would even say until the 1970s, only the northern temperate forest zones had developed mass production forest industries. These industries managed logging, sawing, and pulping of wood on a systematic, daily basis and over huge territories. Elsewhere, in the tropics, in the sub-tropics, even in the boreal northern regions, logging was sporadic and not attached in a permanent way to industrial manufacturing facilities. All of this changed when Japan and South East Asian nations began shopping for wood supplies to feed their construction and paper industries. This paper is about the new industry, its impacts on its own regions, and its impacts on the northern Pacific regions.



## Realizing the New Pacific Community: Integration

*Norio Matsumae*  
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Situations surrounding the Pacific Rim are extremely various and complex due to each region's national identity, culture, history, natural resources, economy, and political milieu. I think that a system of cooperation and a new way of thinking has to be produced in order to join these various regions as a community. Accordingly, regionalism cannot become our model.

Also, the region surrounding the Pacific Rim already has communities of NAFTA promoted by the USA and ASEAN formed in order to oppose penetration by developed nations. These two organizations have different characters and motives. At this point, it is important for us to shape a new identity which will promote a new Pacific Community consciousness.

There is a tense atmosphere felt within the different cultures of this region, but the mosaic diversity is also our strength. It can form the groundwork to produce a new symbiotic system in this region. This groundwork can be built upon resources we have in common for construction of our identity. We should reinforce the base as a community by reinforcing a cooperative system for problem solving. We should also aim at a New Symbiotic Community which is different from the present economy-based community, and should establish the goal of identity at that point. In order to do that, academic cooperation between universities has the most important function for investigating the problems facing us as human beings, problems of development, environment and human community.



## Fisheries, Marine Mammals and the Carrying Capacity of the Pacific Ocean

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The status of the Pacific Ocean fisheries, presently harvesting over 50 million tonnes per year, is briefly reviewed, and it is shown that in the cold and temperate as well in the tropical regions of the Pacific, fishing effort is generally excessive, with numerous stocks (e.g. along the Chinese coast) so depleted that they have lost their productive capacity.

The 90 species of marine mammals occurring in the Pacific consume several times as much food (mainly fish and squids) as humans harvest, and this has led in several Pacific rim countries to fishers' perception of marine mammals as their fiercest competitors. However, the overwhelming bulk of the food of marine mammals consists of very small deep sea fishes and squids ("mesopelagics") not harvestable by humans, thus limiting the

extent of direct competition between fisheries and marine mammals.

On the other hand, it can be shown, based on food web analyses, that the fisheries and marine mammals jointly require, to sustain the populations they harvest, almost half of the primary production of the Pacific Ocean. We interpret this as implying broad limits to its carrying capacity, given that another substantial fraction of its primary production turn into "marine snow," i.e. clumps of dead planktonic algae which sink into deep waters.

The implications of all this are that (i) the Pacific Ocean, vast as it may be, does not allow for the vast increases of fishing effort which characterized the last decades, and conversely (ii) that the best way to ensure continued high yields from Pacific Ocean fisheries lies in much-improved management systems and governance arrangements, leading to local and regional reduction of fishing effort levels, and allowing rebuilding of presently depleted stocks. This implies research much better focused than presently, both in government laboratories and universities, and covering the entire gamut from the biological to the socio-economic and institutional aspects of the fisheries.



### **Achieving a Sustainable Society: Reconciling Ecological Carrying Capacity and Human Welfare**

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It has been argued that human society is approaching, and perhaps has already exceeded, global ecological carrying capacity, and that extension of rates of consumption and production characteristic of industrialized countries to the rest of the globe is simply not feasible. As a result, one of the most demanding and important questions our society is facing is how to create a sustainable society. This paper argues that attempts to address

these issues must incorporate the reconciliation of three imperatives:

- i) the ecological imperative to live within global biophysical carrying capacity;
- ii) the economic imperative to ensure a decent material standard of living for all; and
- iii) the social imperative to ensure the development of systems of governance that have "cultural sustainability."

In industrialized countries, it seem likely that ecological and economic imperatives can both be addressed by means of "dematerialization" strategies that lower the material and energy intensity of goods and services (thus reducing environmental impacts) by substituting information and design for resources (thus improving economic competitiveness). Whether such strategies are economically feasible, would actually reduce net environmental impacts, and would lead to socially desirable outcomes needs careful examination.



### **Science and Sustainable Management in the Pacific Ocean - A Challenge for the New Community**

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The Pacific Ocean has a profound influence on global climate and on the economy and many aspects of life in the nations surrounding this ocean. The El Nino and Southern Oscillation phenomena that result in drastic changes in some fish stocks, cause severe weather, droughts and seasonal changes in different parts of the world provide dramatic examples of this influence. The surrounding Pacific nations have fished some stocks in the different regions of the ocean to beyond their sustainable limits. New biotechnologists and systems of cultivation have allowed a huge increase in the production of farmed organisms in coastal regions to accommodate demands from increasing populations. At the same time, these same coastal regions face increasing pressures from urban and industrial waste



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Norio Matsumae is the President of Tokai University. Before he assumed his current position, he held the posts of President at Hokkaido Tokai University (1981), and Chair of the Graduate School of Arts (1979), and Dean of the School of Humanities and Culture (1976) at Tokai University. Dr Matsumae's interests are wide-ranging and he has a long record of service; he holds a number of directorships in such various organizations as: the Research Institute of Civilization, Tokai University; the Matsumae International Foundation; Japan Satellite Broadcasting; the Advanced Marine Science and Technology Society; The Association for Promotion of Satellite Education; the Japan Music Foundation JESC; and the Design Research Association.

Dr Matsumae holds a B.A. in Musicology (1954) from the Tokyo University of Arts, and a D.S.S. (Docteur ès Sciences Sociales) from Strasbourg University in France (1990). In 1992, he received an honorary Doctor of Engineering degree from King Mongkut's Institute of Technology, Ladkrabang, Thailand. Dr Matsumae's special fields of interest are social psychology and musicology, and his major publications include: *François Couperin: His Lineage and Art* (1985); *Traditional Culture of Contemporary Japan* (1974); and *Histoire de la fonction culturelle des émissions FM* (1991).



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Daniel Pauly is the Principal Science Advisor to the International Centre for Living Aquatic Resource Management (ICLARM) in the Philippines, and a Professor in the Fisheries Cen-

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Dr Pauly's research interests include: tropical fisheries management, fish population dynamics, and comparative studies of growth and related processes in fish. He has authored, co-authored and co-edited over 250 scientific articles, reports and books. A recent book, *On the Sex of Fishes and the Gender of Scientists* (1994, Chapman & Hall, London) comprises a collection of essays providing a summary of much of his previous work. Dr Pauly also serves on the editorial boards of the journals, *Naga* (the ICLARM Quarterly), and *Reviews in Fish Biology and Fisheries*.



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President of the Social Sciences and Humanities Research Council of Canada, Lynn Penrod has held various administrative, teaching and research positions at universities in Canada and the United States since the commencement of her academic career in 1970. In addition to her distinguished record of achievement in the academic community, Dr Penrod has been practicing law since 1986.

Prior to her appointment as President of SSHRC (for a five-year term beginning September 1, 1994), Dr Penrod was the Associate Vice-President (Academic) of the University of Alberta in Edmonton (1992-94). She has been a Professor of Romance Languages there since 1979, as well as a Lecturer in the Faculty of Law since 1986.